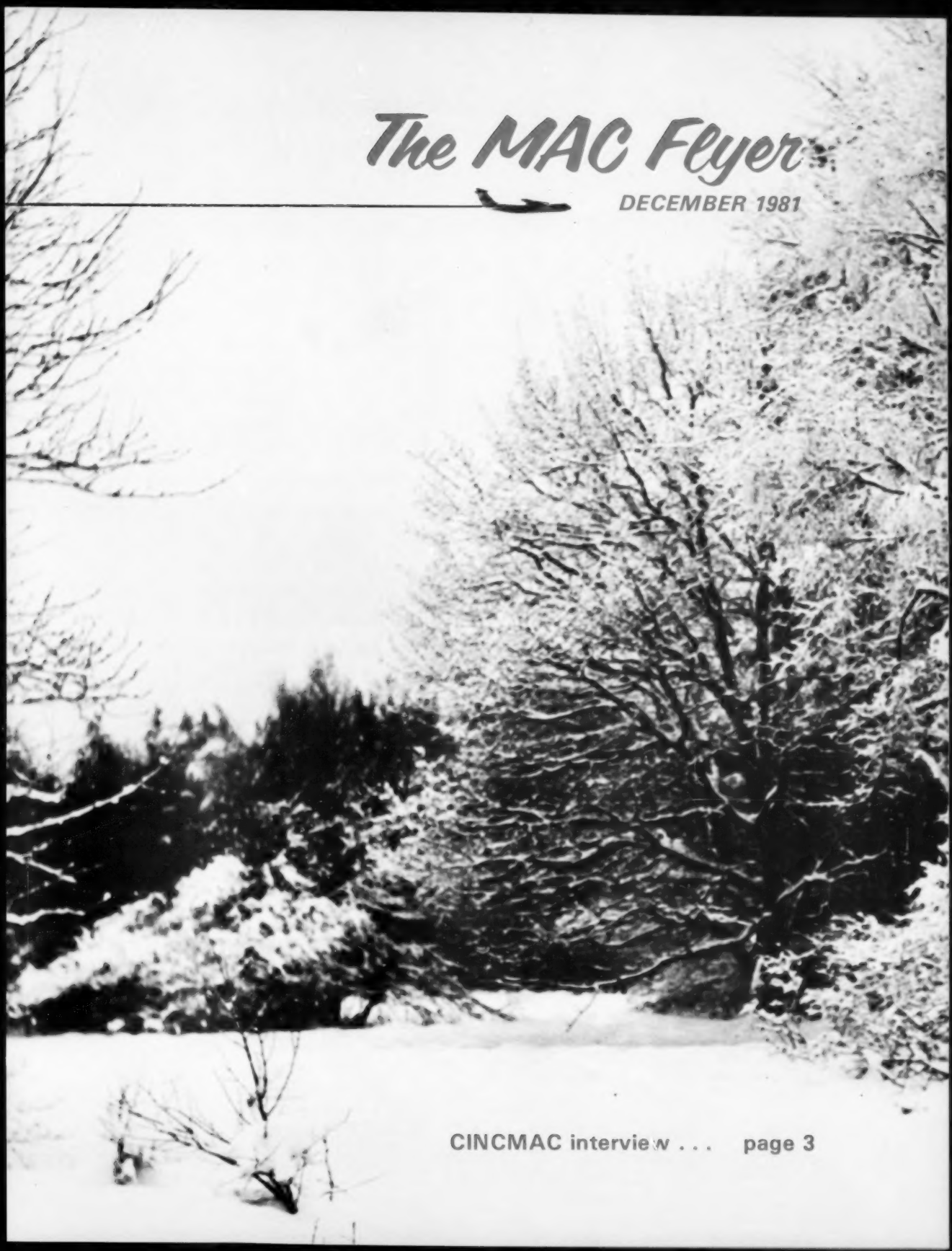
# The MAC Flyer

DECEMBER 1981



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# The MAC Flyer


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For Greater Safety and Efficiency in MAC Air Operations.

MACRP 127-5 DECEMBER 1981 VOL XXVIII, NO. 12

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*The MAC Flyer* is published by the Directorate of Safety, Military Airlift Command, and is authorized until 24 March 1982, unless authorized to continue before that date. The contents are informative and not regulatory or directive. Names of people and places in mishap stories are fictitious; photos in mishap stories are representative and not necessarily of the aircraft or equipment involved. Information in any article may not be construed as incriminating under Article 31, UCMJ.

**Contributions,** comments and criticisms are welcome. Write: *The MAC Flyer,* HQ MAC/IGFE, Scott AFB, IL 62225; or call 618-256-3534 or autovon, 638-3534. The editors reserve the right to make any editorial changes in manuscripts which they believe will improve the material without altering the intended meaning.

**Subscriptions** are available from: The Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Price: $2.25 per copy, $15.00 per year (foreign address: $2.85 per copy, $18.75 per year). Changes of address for subscription mailing should be sent to GPO; give old and new address, including zip codes. USAF Active and Air Reserve Forces units establish requirements for this magazine through their publication distributor (DAPD). Other U.S. Military units should consult administrative directives. *The MAC Flyer* is published at an approximate ratio of one magazine for every five MAC aircrew members, and one for every twenty MAC support personnel.

Distribution F, X; OPR: HQ MAC/IGFE
ISSN 0024-788X

TMF Interview

# General James R. Allen

## Commander-in-Chief Military Airlift Command

**TMF:** General Allen, in 1980 MAC experienced four Class A flight mishaps. This was the fewest number of major flight mishaps in the command's 33-year history, and was the lowest rate per 100,000 flying hours in 12 years. What must we do to maintain or improve on that record?

**Gen Allen:** Well, it goes without saying, the low flight mishap rate was a tremendous achievement. It's an achievement that speaks well for everyone in the command. A record like that doesn't just happen but comes about only through the efforts of a great number of people throughout the entire command. I think, though, that clearly as good as that record is, it's possible to do even better. Now, that's easy to say but difficult to do. There are some who would suggest that there is a certain element of chance or even luck involved when you get down to that few number of accidents. I think it's just like the man said when he was playing golf, "The more I practice, the luckier I get." The more we practice good safety procedures, the "luckier" we're likely to get. In my view, there are two sides to that safety coin; one side says safety on it and the other side says professionalism. It's been my experience over the years that those units that go about their business in a professional way are less likely to have accidents than those organizations and individuals who demonstrate a lesser degree of professionalism. Without question, we can do better than having four Class A mishaps in a year, and I think we should all strive to do so.

**TMF:** What are your specific safety goals for MAC?

**Gen Allen:** The only reasonable goal is zero mishaps in both the flying and ground safety areas. I would set the same objective, of course, for both nuclear and explosives safety. But I would like to expand, for a moment, on ground safety. MAC has had a bad year in ground safety, and we have lost a number of very fine people through ground mishaps. These are the sorts of accidents that just tear one apart. If there's anything that's useless, it's having people get killed in automobile accidents, motorcycle accidents, swimming accidents, or getting electrocuted by accident.

**TMF:** What role do you feel supervision plays in mishap prevention?

**Gen Allen:** I've always believed that there are very few, if any, "acts of God" in the flying safety business. Almost without exception, in the accidents I've had any personal knowledge of over the years, it's possible to find a significant degree of supervisory error in the cause of the mishap. It might be supervisory error on the part of the quality control of the contractor who made a part. It might be supervisory error on the part of an inspector who did not adequately check the maintenance performed on an airplane. It might be supervisory error on the part of an instructor pilot. It might be supervisory error on the part of a major headquarters by virtue of a questionable

procedure which had been adopted and authorized. I think supervisors play a very major role in aircraft accident prevention. I also think it's important that all our supervisors in the Military Airlift Command have a strong sense of personal responsibility for the flying safety program. It's not just the fault or responsibility of that crew chief or mechanic or specialist out in the shop. It's the responsibility of the entire supervisory chain of command to make sure our aircraft are in as near–perfect flying condition as they can possibly be, and that they are flown in a professional manner. And I would hope that throughout the Military Airlift Command all our supervisors have that personal sense of responsibility. That by itself will go far in sustaining a good mishap prevention program and make it even better.

**TMF:** What do you think are some of the things that help motivate aircrews to fly safely?

**Gen Allen:** I think there are a lot of things involved here, but more than anything else I think an environment of professionalism is probably foremost. By that I mean an environment in which peer pressure, if you will, is on the side of professionalism, and is on the side of doing the job right. Similarly, it's an environment on the flight line in which peer pressure supports a very professional and careful approach to aircraft maintenance. To me, flying safety and professionalism are somewhat synonymous. If we can have a highly professional environment, then we'll have an environment that encourages and supports flying safety.

**TMF:** What role does safety play in MAC's peacetime and wartime missions?

**Gen Allen:** MAC is probably the only command whose peacetime mission is almost identical to its wartime mission. The only real difference is the intensity of operations. Clearly, safety plays a very important role in peacetime operations, but just as clearly, safety would play a very important role in our wartime operations. I've been to war three times and, believe me, an aircraft accident in wartime is no easier to rationalize, or justify, or defend to oneself, or to anyone else, than it is in peacetime. It's still a tremendous waste of resources and lives. Our resources are very precious to us; our aircraft, our aircrews, our personnel are precious assets. So I would say that safety plays a very major role in MAC's operations in peacetime just as it would in wartime.

**TMF:** Sir, do you think safety is a good area for a young officer or NCO to get involved in?

**Gen Allen:** Yes, I would think it would be absolutely fascinating area for a young officer or NCO to work in. Safety is an art, not a science,

***There are two sides to that safety coin; one side says safety on it and the other side says professionalism.***

there's no question about that. You're dealing with human frailties, human motivations, human idiosyncrasies. People, let's face it, are wonderful things and everyone of us is uniquely different. Each of us reacts differently to different stimuli. The individual in the safety field is attempting to find those stimuli which will work across a broad range of personalities and individuals, and that's tough. The challenges in the safety business are enormous, but at the same time, I think the satisfaction can be enormous also. When one knows he or she has put together a good program that's working, a program to which people are responding in a positive and objective way, I think there would be a tremendous amount of satisfaction in that.

**TMF:** The human factor seems to remain the weakest link in our mishap prevention efforts. Can we "design out" or make fool-proof more equipment than we do today in order to reduce the likelihood of human error?

**Gen Allen:** Over the years, much has been done along those lines. A number of years ago, we had instruments in the airplanes that were really not conducive to an appropriate crosscheck when you were flying IFR. We had gear handles that looked and felt like handles that did other things. I think today there's a much better understanding of the human factors involved. Aircraft design

techniques have made the operators' job a little less susceptible to error and have prevented unfortunate mistakes in the cockpit and in maintenance as well. This is also more of an art than a science. I think we will find that in years to come, the human factors engineers will get a lot better than they are today, even though they have made a tremendous amount of progress in the last several decades. One of the things that's going to help us a great deal is the ability now to incorporate automated systems into our aircraft which will help the pilot and will warn the aircrews when they are about to make a mistake. Those sorts of things were totally beyond the state of the art a couple of decades ago. They are just now becoming current state of the art and I think we'll see some still more significant improvements in the years just ahead and in future aircraft.

**TMF:** Speaking of future aircraft, what kind of follow-on aircraft would you like to see in MAC's future to augment or replace the aging C-130 and C-141 fleets?

**Gen Allen:** Well, the source selection of the CX, now called the C-17A, was announced this summer. I would hope very much that over the months ahead we'll get the type of support for that system that I believe it truly deserves. I hope that we will go into full scale development and, later, full production on that aircraft. We have a shortfall in MAC's current airlift capability. It is a major shortfall in our ability to carry outsized equipment, and in our ability to deliver outsized equipment to airfields other than the major terminals in the overseas theaters. The C-17 will be a very fine airlift aircraft to fill those voids. The C-141 is a splendid airplane and we are rapidly completing the stretch and aerial refueling modification of that airplane. Lockheed is doing a fine job on that program. It is ahead of schedule and under cost. The C-141B aerial refueling capability gives us the flexibility to do things that would have been difficult, if not impossible, without that program. The C-130 has been around for some while, but it's a great airplane, particularly the H-model. I would hope in the years to come we would be able to procure more C-130H models. The C-5 Wing Modification has good support in the DOD and the Congress, and it will go ahead. This modification is absolutely essential in order to maintain that outsize capability we do have today. Very frankly, it's difficult to see too far beyond these programs, but I would emphasize one important point here. It's not the Military Airlift Command that needs the C-141 stretch, that needs the C-5 wing mod, or that needs the C-17. It's our customers that need it, it's the nation that needs it. We have vital interests literally all over the world, and these vital interests are liable to be challenged at any time. As a nation, we need a manifest capability to project meaningful military power to many remote areas of the world in order to deter challenges to American vital interests. If the challenge does occur, we must be able to confront it and safeguard those vital interests. So it's not MAC that needs augmented and enhanced airlift capability, it's the nation that needs it.

**TMF:** How would you describe your basic flying safety philosophy?

**Gen Allen:** My basic flying safety philosophy is one of professionalism. I see it as an environment of professionalism, which is supported and sustained by peer pressure, by example on the part of our supervisors, and by full participation on the part of our people at all levels. We need this kind of professionalism in our supply business, in our depots, in flight ops and on the flight decks.

**TMF:** Are there any final comments you'd like to make, sir?

**Gen Allen:** Yes, I've talked a lot about professionalism. As a primary customer of MAC in Europe for the last several years, I gained a great respect and a great admiration for the Military Airlift Command because it is indeed a professional command. And since I joined the command, on the 26th of June of this year, everything that I've seen has reinforced the impression I had before I came here. MAC is a very professional command and I'm very pleased to be a part of it. I've had the opportunity to get out and meet a large number of aircrew personnel on different types of aircraft. I've had an opportunity to meet with senior NCOs as well as first term airmen, and I have seen that environment of professionalism on every base that I've visited. I'm confident that it exists at those few places I haven't had a chance to visit yet. It's a great command. It's a command that does a superb job on a daily basis and I'm confident that it will be even greater in the future. And finally, I am pleased to take this opportunity to wish all our people a very joyous holiday season and a healthy, prosperous, professional and safe New Year.

**TMF:** Thank you, General Allen.

**It's not MAC that needs augmented and enhanced airlift capability, it's the nation that needs it.**

# Landing Expectancy

## Some approaches are better the second time around.

by Capt Byron L. Howard
Associate Editor

Did you get the weather for the home drome, copilot?"

"Affirmative, boss. Should be a 'no-sweat' approach if there ever was one. Metro said the weather was 25,000 feet scattered, winds light and variable."

"Super! Okay, crew, we'll shoot the ILS to runway 29 just for practice. Missed approach procedures will be as published. Are there any questions?" (The silence is deafening).

Sounds familiar, doesn't it? In the rush to get into the chocks it may be the same briefing you have heard or given quite a few times. After all, it complies with the requirement in the briefing guide. I mean, it says right there in black and white, "missed approach." So you say, "Standard, as published. Always have and always will, especially if the weather is severe clear." But before you take offense, let me throw some ideas at you that just may keep you on the safe side of the most critical phase of flight. Let's go back to the beginning of this tale with you in the pilot's seat and with me playing the part of "devil's advocate."

**Comply with Instructions**

"MAC 40159 is cleared the ILS, runway 29 approach. Contact the tower now on 126.2." Again, it should be "no-sweat," the weather is severe clear. But what if the tower issues the following instructions?

"MAC 40159, go around, truck on the runway. Execute published missed approach. Contact approach on 118.1."

Somehow you stammer out this request: "Tower, MAC 159, uh, how 'bout a closed?"

"Negative MAC 159. Unable closed. Expedite published missed approach. Contact approach on 118.1."

That was really sweet of the person in the tower, wasn't it? There you were at decision height about ready to go into your pre-flare flare when you heard those positively ugly words, "go around." So now, good buddy, seems to me you were saying something about this being a "no-sweat" approach. So, why are you and the navigator and copilot digging so hard to find the approach book you so smugly stashed back in the pubs bag, thinking you had no further use for it?

Because it's clear and a million and we tend to think, "it'll never happen to me," that's why.

**Complacency!**

Yes, it's true. The pilot was complying with the letter of the law when he did his briefing, but not the intent. Someone had a very good reason for putting in that part about "missed approach" in the briefing guide. What "they" really meant was for you to actually tell the crew what you plan to do with the aircraft, at least initially, so there won't be any surprises when you suddenly have to take it around. In short, you prepare for the unexpected! When tower issued those infamous instructions to our steely-eyed crew, not only the pilot, but the entire crew was lost. Why? Simple, it was complacency. Remember there was a "deafening silence" after the pilot asked, "Any questions?" There were none then, but there should have been. And why were there no questions? Because the crew didn't want to think about the missed approach, they knew they were going to land. They *expected* to land.

**Landing Expectancy**

Underlying almost every approach is a subconscious mental set called, for lack of a better term, landing expectancy. Anticipatory in nature, it is the belief that pilots will land their plane on the first try on *every* approach—*every* time. Now, we're not saying this is bad. A pilot by nature must have this desire to land. In fact, every crew should have a normal amount of "landing expectancy." But ignoring all possibilities, including go-arounds, plus an unhealthy dose of complacency may adversely affect critical decision-making processes. When this occurs, overall safety awareness and perception suffers, and the results may be nothing short of disastrous.

**Why?**

Let's answer the question of why with this question: How many times have you actually gone missed approach? If you're like the overwhelming majority of pilots, the answer is once or twice—maybe. So, if you have had only one or two actual "for real" missed approaches in your career, you are set to land regardless of the actual circumstances. In other words, you are "programmed for landing." (See the article by the same name in the February 1978 issue of *TMF*). You begin to perceive events and external factors as you would like for them to be instead of how they really are. All aircrew members—old pilots, copilots, navigators, engineers and loadmasters—are susceptible to this phenomenon. As a result, then, every one must be on constant guard against a "landing expectancy" type incident.

**The Cure**

Fortunately, there are several ways to prepare for a missed approach situation and help keep everything in its proper and safe perspective. First, try to recognize your mental set. Are you keyed to land regardless? If you are, you can counteract a stronger-than-normal landing expectancy on a conscious level. Overconfidence and complacency can be factors contributing to this "disease." (See the November 1981 *TMF*—"A Contagious Disease"). In addition, keep in mind these three things a pilot or a crew can do to "keep things in perspective."

- Became familiar with the missed approach environment. The simulator is the best place to practice briefing, flying and coordinating missed approaches. It also provides those varied conditions not available to aircrews on an everyday basis. In a simulator, you can learn what can and cannot be done in the cockpit to reduce landing expectancy.
- When briefing the approach, prepare for the missed approach, even though the weather is CAVU and there is absolutely no traffic in the pattern. By doing this, you are practicing for the real thing every time so when the big "go around, truck on the runway" comes from the tower, you'll be 100 percent ready. You'll also reduce any uncertainty that may exist in your crew concering what *you* are going to do—and what you expect *them* to do. The job of eliminating complacency involves the whole crew.
- Know your procedures and follow them. Deviation from set standards can be downright dangerous and is an unprofessional approach to flying. You can preplan many decisions in the approach briefing, thus eliminating "guess work" at critical points in the approach. Reviewing procedures during your approach briefing when there is any doubt among the crew also places you one step closer to a successful approach and, if necessary, missed approach.

We all expect to land out of our precisely flown and precisely executed approaches. That's normal and altogether acceptable. Adequate planning and a flexible attitude, though, will prevent us from neglecting all other possibilities and increase the likelihood of a safe landing, even if it is the second time around.

# A Christmas Gift for the Guard

by Capt Gale E. Clouse, Jr. and
Capt Byron L. Howard Associate Editors

## The Savannah Guard gets new C-130H's

Photos courtesy of Lockheed-Georgia Co.

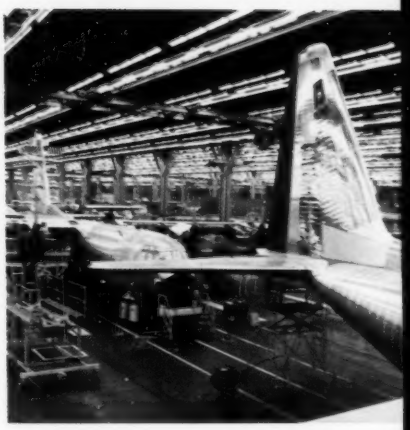
We all like to get something new for Christmas. And MAC missions to places like Osan, Torrejon, Aviano or Frankfurt this time of year seem to be filled with a little more "crew bargaining" than usual, what with shopping forays to our favorite shops and concessions to pick out that special gift. No matter how old we get, though, there's still that tingle of excitement and anticipation in both giving and receiving. That's true to some degree any time of year and with any gift, but it's especially true during the holiday season. Of course, there are gifts and then there are "gifts." Some flyers might dream of ultimate gifts like their very own shiny-new airplane to fly. Others may wish for even bigger gifts, in the form of new Air Force airplanes to fly—sort of a gift from grateful taxpayers to those who defend our freedoms so we *can* celebrate holidays like Christmas.

Well, for the flyers in the 158th TAS, Georgia Air National Guard at Savannah, Santa Claus is alive and well and living in Marietta, Georgia. Well, his workshop is there, anyway. And he's about to deliver to that unit a pre-eminent present. By Christmas day, seven newly-painted and camouflaged C-130H models will have found a home with the Georgia Guard unit. They will be trading in their C-130E's for the H-models as part of the Air National Guard's airlift enhancement program.

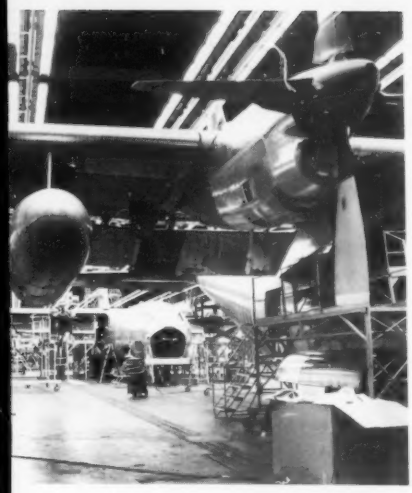
Sixteen C-130H's have already been delivered to other units of the squadron's parent wing, the 137th Tactical Airlift Wing (TAW), headquartered at Will Rogers World Airport in Oklahoma City, as part of this program. When the final C-130H's are delivered to Savannah this year, the 137th TAW will become the first all H-model C-130 wing in the Air National Guard. The other two squadrons of the Oklahoma City-based wing already have C-130H's. They are the 185th TAS of Oklahoma City and the 183d TAS of Jackson, Mississippi.

### The C-130H Guard "Buy"

The Air National Guard airlift enhancement program involving C-130's began in the summer of 1979 when eight new C-130H's were delivered to the 185th TAS,



Oklahoma City. This was the first time in ANG history that new, assembly-line-fresh Herks were delivered to a Guard unit. Following the Oklahoma Guard's lead in 1980, the 183d TAS at Allen C. Thompson Field, Mississippi, became the second ANG unit to be equipped with the new production C-130H's. Prior to 1979, the ANG received its C-130's used or, as they say in the used car business, "pre-owned." The active duty forces would "trade-in" their "old" planes to the Guard or to the Reserves for the latest C-130 aircraft off the production line. Thus, MAC active duty crews usually saw the ANG



or Reserve "weekend warriors" at places like Pope AFB flying C-130A's, C-130B's or the older E-models.

A lot of you "old" Herk drivers can probably remember seeing your first Guard or Reserve C-130A, B or E-model on the ramp at Pope AFB. Remember how you never saw a flight engineer below the rank of Master Sergeant or a crew chief below the rank of Tech Sergeant? And remember looking inside the Guard or Reserve C-130's? Granted, they had a lot of miles on them, but more than a few looked none the worse for wear. Do you remember what the Reserve and Guard crews said about them?

"Well, my Herk may not shine up quite as good as it used to, but it will outfly that one of yours, kid!" Volant Rodeo proved that the Guard and Reserves could really take care of the C-130. Some of their planes were nothing short of immaculate and one glance told you they were maintained with tender loving care. The Savannah Guard's C-130E entry for the 1980 Volant Rodeo was really outstanding. With that kind of upkeep, the new H-models should be around for many years to come so the Guard can safely continue flying the missions that contribute so much to the nation's "total force" airlift capability.

**Safety Record**

Not only does the 137th TAW of Oklahoma City and her subordinate units have the opportunity to create new safety records with their new C-130H's, they also can proudly boast of an impressive flying safety record to date. The parent wing, the 137th TAW, has flown over 21 years and has over 300,000 flying hours without a Class A mishap. The 185th TAS at Oklahoma City and the 183d TAS at Jackson, Mississippi, both have over 100,000 accident-free flying hours each. The 158th TAS at Savannah has over ten years without a Class A mishap. These units' superior flying safety achievements weren't easy to obtain, especially in the light of the demanding missions they perform.

The 137th TAW and its subordinate units fly across the globe in as many types of weather and terrain conditions as you can imagine. They conduct ANG and MAC airlift support missions, joint airborne exercises, local proficiency and local airdrop/tactical missions. Their crews have supported missions in Panama and the Caribbean so often you would think they were stationed there. Not content with that, a lot of these weekend warriors have demonstrated that if you really want to "train like you're going to fight," you'd better call on the Guard and Reserve. Units and individuals from the 137th have left their mark at Red Flag and Maple Flag, teaching and leading active and reserve forces in victories over the "bad guys."

**The C-130H Model**

"Flown one, you've flown 'em all." Hope you don't think this is true for the C-130H. True, the looks are the same, but there are some big differences between this machine and previous models. The four Allison T56-A-15 engines are flat rated at 4,200 shp. Where the C-130E suffered under a hot day, heavy-load situation, you'll have to watch the H-model's torquemeter like a hawk. Remember, the red line on this latest Lockheed Legend is 19,600 inch-pounds of torque. Ever heard of cruising at 970 TIT? That's reduced power on the C-130H. The C-130H also has improved air conditioning over the older model Herks. And the C-130H doesn't have wing isolation valves, either. Just one bleed air divider valve takes care of any leaky bleeds.

There are some old familiar friends in C-130H avionics. Herk crews will still remember the reliable C-12 compass system, APN-147 doppler, and the ASN-35 computer. The standard ARN-131 Omega navigation system is still around as well as a sextant—government issue, one each—plus associated mount. Formation enthusiasts will immediately recognize the APN-169A intraformation positioning set or SKE (station keeping equipment). Navigators will also recognize the APN-59E radar on the C-130H's.

To all you Guard crews, have fun with your new Christmas gifts. Your H-models join the long line of more than 1,600 previous C-130's operated around the world. With that tender loving care the Guard is so famous for, these newer Herks should continue the Guard's tradition of safe and professional mission accomplishment—and that tradition is nothing short of spectacular.

**Honorable Mention, 1981 MAC Flying Safety Writing Contest.**

**A C-141 instructor pilot writes . . .**

# *Thanks for the Memories*

**by Capt Stephen C. Wilkinson**
**97 MAS (Assoc)**
**McChord AFB, Washington**

Dear MAC,

You don't know me personally, but I thought I'd drop you a note to thank you for all the things you've given me these past several years. Oh, I know you don't need a thank you, but even so, I'm grateful. Let me take you back a few years and jog your memory.

We first met in 1973 at Altus. You know, your strategic university. You taught me the inner workings of a big airplane. I remember well those training aids showing hydraulics, electronics and pneumatics. Those machines weren't cheap either, MAC, and they certainly helped clear up some of my misunderstandings. And when I was still stumped, you personally took time to explain every last detail so even a wet-behind-the-ears brown bar could understand.

After all that classroom work, we put together the initial pilot skills I learned in UPT and everything you taught me and applied them to a whole new animal—the flight simulator. This machine was no "Link Trainer"—it actually moved, tilted and dipped—enough for even a hotshot T-38 student to get queasy. It was in those first few training sessions that I heard about the subject of professionalism. It started with my uniform, the one with the class patch and white wings on the blue background. I can still hear your "comments" about the professional wear of the flight suit—no extra "goodies." Only regulation wear approved. At the time, you used the reason that we flew high visibility, worldwide missions. Therefore, we should look and act appropriately. Of course, my pride was hurt but you were right as I was to discover later.

After more simulator sessions than I care to remember, you took me out to a C-141 Starlifter. If you remember, we actually flew it a few times. I got to know Altus and Clinton-Sherman better than the practice areas of pilot training. And underneath all that work, hiding, waiting, ready to embarrass me at any moment was the ADF approach. You ought to be ashamed for making me fly those things without a tail on the bearing pointer. Still, you were most patient during my stay at Altus and I thank you.

We ran into each other again after I'd visited Survival School. You showed me around your installation—how a big base really functions. In fact, you called it Young Officer Orientation Program (YOOP). It was a little long and it stood in the way of my "dollar" ride. But after it was all over, I seemed to know the base, the people and your entire purpose a little better. Then as a reward for Altus, Survival School and YOOP, you introduced me to the world. Thanks, MAC.

We stayed partners for a long time after that—you in the left seat and me in the right. Sometimes you would even sit in the navigator's seat and a few times I'd even see you pushing cargo or hunched over a DD Form 365F. Wherever you were, though, I learned a great deal. Aircraft operations were your favorite topic, but occasionally you would lapse into a lecture on crew management and that word professionalism would creep up every once in a while. When you weren't the AC, your point of view seemed to change, but I think I understand.

Somewhere among all that darkness over the North Pacific, we began to talk about safety and standardization. I had heard a little about them ever since Altus and even read about them in your magazine. But they were both subjects you have to experience, feel and see. You never stopped talking about them and as if that weren't enough, someone asked me to become a Safety Officer and start spreading the safety message. I soon discovered that safety wasn't all green crosses, incident reports and investigations. It is a way of life, every minute and every second, and standardization is one of the main tools you employ to achieve that lifestyle.

Even though I talked safety and worked with those standardization guys for a while, the whole process was driven home the first time I hopped into the left seat and you weren't there to hold my hand. For the first time, I really understood the meaning of the word, "lonely." Alone, or at least I thought I was, I realized you had left me some of your friends to help out—the "crew" you used to call them. Thanks!

There were moments during the time I was an aircraft commander when I may have appeared ungrateful. A long TDY to Clark as the Supervisor of Flying seemed unnecessary as did the thirty days (or was it years?) to Elmendorf. Still, as time passed, I realized that you were showing me how your intricate system works from the ground up. I am grateful.

Our paths crossed next at Altus again. I had been sent there to Instructor Aircraft Commander School. There I learned everything I thought I already knew. Learning how each system worked had taken a few years, but learning how to explain it was only supposed to take three weeks. MAC, you must have thought it was going to be easy, so you added one other little tidbit—flying. Your staff, as usual, did their excellent job of turning out a graduate and I was dispatched home

to keep a watchful eye on the local pattern. Again, there was the nurturing process there too, just like before. And after becoming an AC and then an IP, safety and standardization seemed to occupy a little larger space in my work-a-day world.

**Somewhere in the darkness over the North Pacific, we began to talk about safety and standardization.**

I could go on and on about all the good times and bad we had together, MAC, the stuff you taught me and those things one learns only after making mistakes. Even though you were always there watching, you elected to let me learn, sometimes the hard way, like when to have one more drink and when not to; what to eat and, more importantly, what *not* to eat; how many goodies to bring home from overseas and, most importantly of all, what happens when you don't keep your nose in the flight manual. Yes, MAC, you taught me a lot about a lot of things all lumped under your favorite topic—professionalism. I'm still learning about it and I hope it never stops.

I guess I'm grateful for a lot of things, MAC—professionalism, safety, standardization, etc. But most of all, thanks for your (and my) friends and all the good memories.

Thanks for the Clark "blitz burger," Mongolian barbecue, minus 53° F at Eielson and my first call on the carpet. I appreciate them all because each had its own significance.

We haven't been seeing each other as much these last few years, MAC. You've been busy with the "stretch," aerial refueling and air drop, and I've been reduced to some of your part-time help. I'd be lying if I told you I didn't miss your talks, experiences and all our friends. It seems that anyone who was ever acquainted with you has a strong bond with all of us. I was touched when I talked to someone who started with your predecessor, MATS. We found we shared many of the same kinds of memories. It is probably no surprise that we could both sign this letter with twenty years difference in our ages.

Finally, I thought you'd like to hear of an incident that happened not long ago that might be all the thanks you or anyone could ever want.

A young expectant mother needed to get to a stateside hospital before she delivered prematurely. One of your aircrews stopped in the middle of their mission and reconfigured their plane as an air-evac. The whole crew pitched in to prepare the aircraft so when the patient arrived it was only a matter of minutes before she was being flown toward help.

As you might expect, the weather wasn't very cooperative. The crew flew down to minimums at the end of a very, very long duty day. By block time, the young mother-to-be was about to give birth and any delay might have had serious consequences. There were no delays though, MAC, and the young woman was rushed to a nearby hospital. The father-to-be turned to the entire crew and asked, "How can I ever thank you guys for all of your help?"

Then someone on the crew said, "If it's a boy, name him Mac."

So we did, and if he turns out like you, MAC, my wife and I will be very proud indeed.

Thanks again,

A MAC Crewmember

P.S. I'll keep in touch if you will.

**ABOUT THE AUTHOR**

Capt Stephen C. Wilkinson was commissioned through ROTC from the University of Iowa in 1971. After graduating from UPT in 1972, he was assigned to McChord AFB where he flew C-141's. Capt Wilkinson served as a Squadron Chief of Safety and a Wing Stan-Eval Pilot at McChord. He is currently a Boeing 727 Second Officer and Check Airman with Republic Airlines and a C-141 Instructor Pilot with the 97th MAS (Associate), McChord AFB, Washington.

# 'Tis the Season

What? You missed that prize winning contest announcement in the November *TMF*? (Or was it the writing contest announcement about "prize winning?")

Not to worry, my fellow flyers, you still have time to enter this season's MAC Flying Safety Writing Contest. It's barely begun, but beware, it ends on 31 March 1982."

You may not write as frequently as we ink-stained wretches on the *Flyer* staff manage to. But lurking in those dark corners of your memory or imagination may be a flying experience worth sharing. In case you think you might have trouble spinning a tale of intrigue and impending disaster, we have devised a few tips to help you along the road to literary luster:

- Pattern, pattern, who's got the pattern? There are several patterns you can use to weave your tale. Tell what happens in the story by chronological order. This is the time pattern. Other effective patterns include problem-solution, cause and effect, or use the old analysis pattern. We ask that you leave out the identifying names of individuals or units in your stories.
- Consider writing a fictional account based on actual experience. Here you can build drama and impact, invent characters and let your imagination run amok as you create your own scenario.
- Poetry is another form of creative writing which can make you a 1982 winner. Those with a recognizable rhyme scheme generally fare better than "free verse." Modern songs or the great poets' works may be good sources for your format. You may even be inspired to do a parody of a well known song or poem.
- Remember those *Tongue and Quill* fundamentals: use English that's alive, support your ideas, make a first cut, revise and edit.

There are many tips we could pass on but we hope these will get you started. Your story should be believable. The best stories will be technically accurate as well. Incidentally, you don't need to bludgeon the reader with your safety message. The most effective morals and lessons are self-evident.

In addition to all these nifty tips, we've listed the "offical rules" below.

## The Rules

The 1982 MAC Flying Safety Writing Contest is conducted according to MACR 900-3 and the following rules. All entires must be original, unpublished, and postmarked no later than 31 March 1982. Stories must be between 1,000 and 3,000 words long (about 6 to 14 double-spaced typed pages); poetry should be about 75 to 100 lines. Entries must contain an aviation safety message. Manuscripts must be double-space typed and submitted in two copies. The article will be identified by title only, and a coversheet will be attached showing the author's name, address, phone number and unit. Also, the coversheet should contain a brief autobiography.

The contest is open to anyone, and entries qualifying under the above rules earn their author a free C.R. Terror T-shirt and a one-year subscription to *The MAC Flyer*. However, contest prizes (desk sets and plaques) may only be awarded to military and civilian employees of the DAF or Air Reserve Forces. Other entrants may be selected for Honorable Mention in a Special Category. All winning stories will be published in *The MAC Flyer*. Entries should be addressed to: Safety Writing Contest
HQ MAC/IGFE
Scott AFB, IL 62225

# Out I Went

## An Army pilot "flies" against the wind.

Mr. James Tobin and his copilot, Robert Pearce, were enroute to Aberdeen Proving Ground, Maryland, with a shipment of small arms from Army Armament Research and Development Command (ARRADCOM), Dover, New Jersey. The Beechcraft U-21 had just reached cruising altitude when the door-open warning light flashed on indicating that the exit-stairway door located near the aft end of the passenger cabin was ajar.

Mr. Tobin, an aviator with over 3,000 flying hours, decided to go back and check the door while the copilot flew the plane. "It seemed locked," he said, "but when I jiggled the door, it suddenly popped open and out I went! If I hadn't instinctively tightened my grip on the door handle with my left hand, it would probably not have pulled me out."

As soon as he was outside the U-21, the wind whipped his free right arm around and up against his back breaking the arm. His left hand was forced off the handle and miraculously caught the rope railing of the now deployed exit stairway.

"For a split second I had hold of nothing. I can't really remember what happened, but my heart probably skipped a beat or two. I grabbed hold of the rope and the wind streamlined my body so I was being dragged parallel to the fuselage."

Meanwhile, the copilot realized that Tobin had fallen outside the aircraft but was somehow hanging on. Not able to leave the cockpit—the plane had no autopilot—Mr. Pearce reduced airspeed and contacted air traffic control who directed him to Solberg Airport, 20 miles southwest of Morristown, New Jersey, as the nearest suitable airfield. Slowing the aircraft enabled Mr. Tobin to, in his words, "fight with all my remaining strength to get my leg up and inside the door opening." He added, "I just knew I had to do it. Otherwise, I remember thinking, it was going to be a sad Christmas for my family. [The mishap happened in December 1980]. Once I had my foot in the door I knew I was not going to let myself fall."

Despite the 200-knot wind, Mr. Tobin didn't feel cold and his arm didn't hurt for the more than seven minutes he hung from the descending plane. "My mind was elsewhere," he later explained.

But the pilot noticed that the now extended landing gear wheels were no lower than his head, he summoned a little more strength to pull his body higher. "There was no way I was going to make it that far and then die. My head was off the ground by 4 or 5 inches, at least." He was still low enough, however, to be pelted in the face and head by pebbles bouncing up from the runway during the landing.

When the plane stopped, Tobin was too weak to move. "It was kind of a blur. People were coming out of nowhere," he recalled. A paramedic team rushed him to a medical center in Somerville, New Jersey.

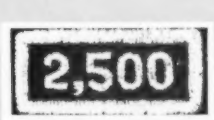
"The Lord must have something else planned for me. He didn't take me this time," the Army pilot commented from his hospital bed. "My copilot was super; there were no bounces on the landing or anything." Later he quipped, "What a way to start a job," since the very eventful flight happened on his first day of work as a civilian employee with ARRADCOM after over 10 years of military service. After a few weeks of recovery, Mr. Tobin returned to work where he plans to keep flying—inside the aircraft.

—Adapted from U.S. Army's *Aviation Digest*

# MAC INDIVIDUAL FLYING-HOUR MILESTONE AWARDS

CMSgt Richard W. Thompson, 21 TAS
SMSgt Stephen Collins, 15 MAS
MSgt Donald F. Elliott, 53 MAS

Lt Col Frederick J. Barlow, 6 MAS
Lt Col John F. Daniels, Det 2, 1401 MAS
Lt Col Paul E. Gallo, 6 MAS
Lt Col William Molton, 53 MAS
Lt Col Scott M. Ryder, 53 MAS
Maj Paul M. Simons, 53 MAS
Capt David N. Cliff, 6 MAS
CMSgt Harold B. Jernigan, 53 MAS
SMSgt Russell McCoy Jr, 53 MAS
MSgt James E. Couglin, 53 MAS
MSgt Marvin R. Guy, 53 MAS
MSgt William Jarzombek, 53 MAS
MSgt Daniel L. Perkins, 53 MAS
TSgt Larry J. Glenn, 815 WRS
TSgt Victor C. Perry, 86 MAS
SSgt Luel A. Marshall Jr, 86 MAS




Lt Col Robert M. Anderson, 37 ARRS
Lt Col Douglas A. Brosveen, 1550 ATTW
Maj William L. Gotcher, Jr, 1550 ATTW
Maj David C. Juday, Det 6, 37 ARRS
TSgt Ronald M. Clark, 1550 FTS
TSgt Lloyd E. McCarter, 1500 FTS

(ranks and units are those at time of award).

# The Legend Lives On

The first of the finest. The "City of Ardmore" flies over the "windy city." Now with the 928th TAG, Chicago-O'Hare, the first Air Force C-130 continues a history of service and pride.

**by Capt Byron L. Howard**
**Associate Editor**

Twenty-five years is a respectable length of time. It's a quarter of a century. It can be a lifetime—ask anyone who's been married that long. And speaking of marriage, if your anniversary falls on 9 December, you and your spouse have something in common with C-130's. On that date in 1956, the first C-130A was delivered to TAC's 463d Troop Carrier Wing (TCW) based at Ardmore, Oklahoma. In the 25 years since that date, not a lot has changed. The 463d TCW became MAC's 463d Tactical Airlift Wing based at Dyess AFB, Texas and they're still flying C-130s—only now they're H-models. And the C-130 is *still* coming off the assembly line in Marietta, Georgia. Yes, 25 years is a long time.

**Durability**

If you've been around C-130's for any length of time, you've probably heard most of the adjectives used to describe the Hercules. The most commonly used are "rugged," "reliable," "dependable," "can-do" and the like. And the folks at Lockheed knew the design was sound, that the "Herk" was strong. But probably not even Leo Sullivan, referred to by many as "Mr. C-130," knew just how strong it was, or how reliable, or how adaptable. I suppose the word "durable" is probably the best description of the plane though. The very first one off the assembly line is still flying as is the first plane delivered directly to the Air Force. Over 1,600 have rolled off the assembly line. In all, it just may prove to be the most durable airplane of any type in the history of aviation.

**Records Galore**

The venerable airlifter, according to all known facts, began to take shape early in 1951, which actually makes the Herk older than the author—by just a little. Three years later, the YC-130A, number 1002, made the first of countless takeoffs and landings, and started a string of records that continues today. For instance, the C-130 is the largest aircraft to ever land or take off from an aircraft carrier without benefit of tail hook or catapult. Most of you know how long a Herk will fly, which is virtually forever. Often accused of "making" fuel, an HC-130 flew from Taiwan to Scott AFB, Illinois nonstop. That's a distance of 8,732 nautical miles, or 14,052.950 kilometers for you metric types. In 1964, a civilian L-382B managed to stay aloft for 25 (there's that number again) hours and 1 minute. And then there were the folks down at Dyess who flew one of their C-130H's nonstop from there to RAF Mildenhall, a distance of about 4,525 nautical miles. Officially, though, the C-130 holds only one record. This was when some Marine paratroopers departed one of their Herks in the vicinity of 44,100 feet! (On another occasion, it was rumored that one controller, used to handling C-130's much lower asked, "Why do you want to fly at FL370?" An airliner type at FL 350 heard the conversation and couldn't help but remark, "I don't care what he's doing up there. What I want to know is how he got there in the first place?")

**Anything and Everything!**

Well, the C-130 has done *almost* everything. As one of our former editors said in an article one time, "Sure the Hercules was *strong*—but who could know that a short-haul tactical bantam rooster would have roles of attack, recon, rescue, strategic airlift and aerial refueling?" It has also been a bomber, hay-hauler, airshow star and flying fire truck. The Herk has literally built countries from nothing, saved the homeless, and rescued those taken and held against their wills. C-130's have launched drones, recovered satellites in mid-air, as well as people; it has been both refueler and refueled. Semi-specifically, there are 13 prefix and 11 suffix letters you can place

"Yahoo!" Doing what it does best, a C-130E delivers the goods via a LAPES drop during an Army exercise in Europe.

Refueler and "Refuelee." An MC-130E is on the receiving end of a KC-135.

Photos courtesy of Lockheed-Georgia Company.

before and after "C-130," to wit: prefixes—A, D, E, G, H, J, K, L, M, N, R, W and Y. C-130 suffixes are A, B, D, E, F, G, H, J, K, N, P, and R. (Mix and match at your leisure.) The Herk is at home anywhere from a couple of feet AGL to FL 440. And if you can think of any designation I've omitted, I'd like to know about it.

**Safe**

If we said the C-130 was a safe plane, you might say, "So what else is new?" With an accident rate rapidly approaching 1.0 per 100,000 flight hours, the Herk's safety record is one of the finest in the Air Force.

Years ago, some predicted the C-130 in all its various combinations might well continue into the 21st century. I don't think there's any doubt. In fact, I guess you could say the more things change, the more they stay the same. Moreover, I'm willing to bet that 25 years from now there will still be plenty of Herks around. The only difference will be that future Herks might probably be designated C-130X's, Y's, or Z's!

Classic and classy. The prototype C-130A flies somewhere over California.

"Look Ma! No tail hook!" The *USS Forrestal* has the honor of hosting the largest plane ever to land or take off from an aircraft carrier, unassisted. Date: 1963.

# EXCELLENCE IN AIRMANSHIP

Left to right: TSgt Dayle C. Wymer, ILM; SSgt Theodore A. Gorczynski, IFE; Lt Col Norman G. Gross, IP; and TSgt Billie R. Johnston, FELM.

**Lt Col Gross and crew** from the 16th Tactical Airlift Training Squadron, Little Rock AFB, were conducting C-130 initial qualification training at Shreveport Regional Airport, Louisiana. When the student copilot raised the landing gear handle after a low approach, the right main gear remained in transit. Lt Col Gross assumed control of the aircraft and directed the copilot to lower the landing gear.

The left main and nose landing gears extended normally. The right main landing gear, however, remained in transit. After moving a pallet that blocked the viewing panel, the loadmasters and the flight engineer tried manual extension procedures but with no success.

After arriving back in the Little Rock area, the aircraft commander entered holding near the base and tried manual landing gear extension procedures again. These were successful in getting the aft strut down and locked, but the forward strut remained in transit. The crew then discovered that the forward strut was sitting on the shelf bracket about 10 inches from the down and locked position.

Lt Col Gross tried to maneuver the aircraft to dislodge the right forward strut. This did not work either. The crew then opened the access panels and secured the landing gear using the main-landing-gear-tie-down emergency procedures in the Dash One. Two long hours had elapsed from the time the pallets were moved to the time the crew positioned the chains in a final effort to secure the landing gear.

This last measure held the gear in place long enough for the Hercules crew to make a successful approach and landing at Little Rock AFB. The decisive actions and professional competence of Lt Col Gross and his crew were responsible for the safe recovery of the C-130 aircraft and for preventing loss of life.

**Major Cunningham and Lt Colonel McMaster** were flying a CT-39A local proficiency training mission. When the landing gear was extended for the third practice approach, the right main landing gear indicated unsafe. The crew immediately began emergency landing gear lowering procedures.

Multiple attempts at lowering the gear did not work. A MAC Conference Skyhook was established to help solve the problem. The gear still indicated unsafe after more attempts. All indications supported the opinion that the gear would collapse on landing roll. After all avenues had been exhausted, the crew began preparations for landing with an unsafe main gear.

Fuel was burned off to give an optimum landing weight. The burnoff allowed the crew to avoid an excessive approach airspeed but still insure a safe recovery.

Major Cunningham flew a stable straight-in approach. He minimized changes in angle of attack, and skillfully brought the Sabreliner in for a smooth, controlled touchdown. Lt Col

McMaster helped by handling the radios and by complying with the published emergency procedures.

Landing was planned for the left side of the runway, away from the defective gear. Major Cunningham prepared for serious control problems from the imminent failure of the landing gear. He landed the disabled aircraft on the left main gear and tried to keep the weight of the aircraft from prematurely collapsing the right gear. This allowed him to slow the aircraft even more which lessened the degree of potential damage after gear collapse.

Nosewheel steering was used as the right main landing gear began to fold and the wing began to drop. The gear continued to collapse causing the tire to drag on its side. The right tire then failed. Major Cunningham continued to maintain directional control through the skillful use of left wheel braking and nosewheel steering. The right wingtip contacted the runway but Major Cunningham prevented the CT-39A from entering a dangerous ground loop. The aircraft came to a stop about 20 feet left of centerline on runway heading with 3,200 feet of runway remaining. After accomplishing emergency shutdown procedures, the crew successfully egressed from the aircraft.

Structural engineers later examined the aircraft and expressed absolute amazement at the limited damage. The crew's handling of this emergency exemplified the highest standards of professionalism. Their airmanship prevented a much more serious mishap.

**Captain Thiery G. Curtis**, HQ ARRS Stan-Eval, was flying an Air National Guard HC-130 on a return flight from Suffolk County ANGB, New York to Scott AFB, Illinois. Up until touchdown, everything felt normal.

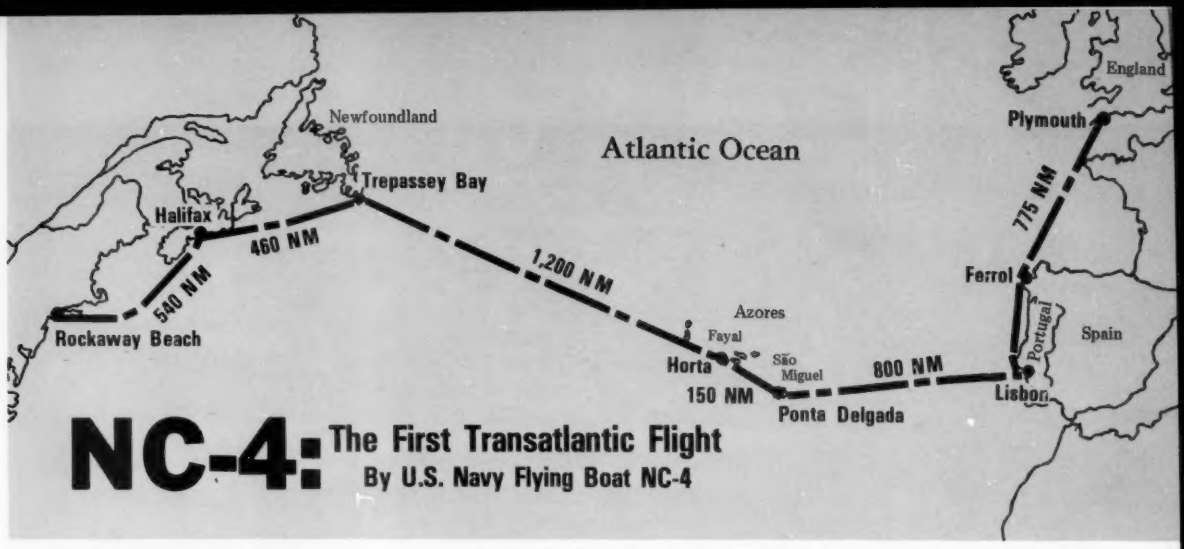
However, when the nosewheels were lowered to the runway and the throttles retarded to ground idle, the aircraft started a violent pull to the right, heading toward the edge of the runway. Capt Curtis instinctively applied maximum reverse to number one and number two engines to correct back to the left and to regain control of the testy turboprop.

Captain Thiery G. Curtis.

As the aircraft slowed and the nosewheel became more effective, the Hercules again veered violently to the right. Reverse on the left two engines and left braking had no effect. The tower then called and advised the crew that smoke was coming from underneath the aircraft. Captain Curtis used maximum braking, stopping the aircraft before it could veer off the side of the runway. With the plane coming to rest 14 feet short of the grass, the crew egressed immediately without injury.

Because of an internal failure in the nose gear, the pilot had unknowingly landed with the nosewheel cocked 45° to the right in a situation that could have spelled disaster. Capt Curtis' skillful excellence in airmanship, though, prevented a more serious mishap and minimized damage to the aircraft.

Left to right: Lt Col Larry L. McMaster, FP; Maj Clifton Cunningham, IAC.




by Capt Ted Wilbur, USNR

*Today MAC crews routinely fly across both oceans to the farthest corners of the globe. Yet only 62 years ago, U.S. Navy flyers faced the challenge of flying an aircraft across the Atlantic Ocean to Europe for the very first time. Their initial attempt met with success in a flying machine called the NC-4. This is the story of that historic first transatlantic flight.* — Ed.

The flight of NC-4 was conceived in August 1917. Rear Admiral David W. Taylor, chief of the Bureau of Construction and Repair, decided that for anti-submarine work the U.S. Navy needed a large, sea-based patrol-bomber that would be capable of flying directly to the theater of war in Europe. The design work was assigned to Commander Jerome C. Hunsaker, assisted by Commander George C. Westervelt.

Glenn H. Curtiss, pioneer aviator and the "father" of the aerial flying boat, was called in as a consultant to work out the design details.

In January 1918, the Navy gave Curtiss a contract for four NC (Navy-Curtiss) flying boats. The components of the aircraft were manufactured by several subcontractors and assembled at the new Curtiss plant at Garden City, Long Island. The major components were then trucked to the nearby Rockaway Naval Air Station for final assembly and flight testing. Within nine months after the contract was awarded, the NC-1 stood assembled at Rockaway. On 4 October 1918, NC-1 rose from the waters of Jamaica Bay for her first flight.

With the end of "The Great War" in Europe on 11 November 1918, there was no longer an immediate need for these huge, expensive flying boats. A few days before, however, Commander John H. Towers had proposed to the Chief of Naval Operations that an attempt be made to fly the NC boats across the Atlantic before the summer of 1919 as a demonstration of American air power.

Several routes were examined and it was determined that the NC flying boat did not have enough range to fly nonstop from Newfoundland to Ireland or England. The flight would therefore have to be made by way of the Azores and Portugal. On 4 February 1919, Secretary of the Navy, Josephus Daniels, approved the plans for the transatlantic crossing.

On Thursday morning, 8 May 1919, NC-1, NC-3 and NC-4 (NC-2 had been cannibalized) took off from Rockaway for Halifax, Nova Scotia, on the first leg of the transatlantic journey. The flight was under the command of Commander John Towers, who was also commanding officer and navigator of NC-3. NC-4 was commanded by Lieutenant Commander Albert C. Read, and NC-1 by Lieutenant Commander Patrick N.L. Bellinger.

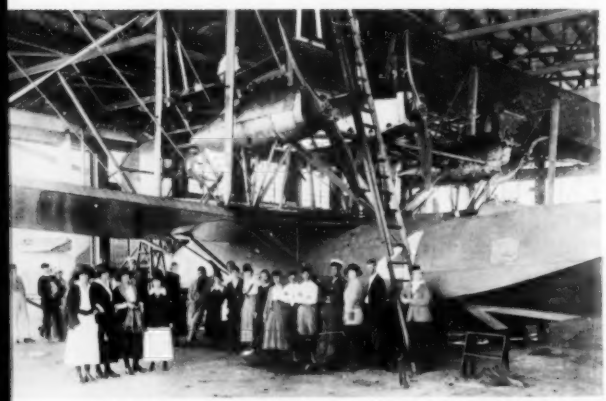
Offshore of Cape Cod, NC-4's center engines failed, necessitating a precautionary landing at sea, after which they taxied to the Naval Air Station at Chatham, Massachusetts for repairs. NC-3 and NC-1 arrived at Halifax without incident, but next morning serious cracks were discovered in their propellers and a day was lost replacing them. On the 10th, NC-1 and NC-3 continued their flight to Trepassey, Newfoundland, the jumping-off point for the transoceanic attempt.

At Trepassey a small fleet had gathered to support the historic flight. When the NC's took off across the Atlantic, 21 destroyers would be on station at 50-mile intervals between Cape Race, Newfoundland, and Corvo, the western-

most island of the Azores. The destroyers were to serve as visual and radio navigation aids and communication links. They were also to provide weather reports and, if necessary, rescue service. The security of having 21 destroyers strung out between Newfoundland the Azores may give the impression that the flight was a very simple affair. But in 1919 it was not! Aerial navigation across a great trackless sea was not yet an art, much less a science, and aircraft radios were primitive and unreliable. Many flight instruments had not been invented so it wasn't easy to zero in on nine tiny islands scattered over several hundred square miles of ocean. If an eastbound pilot missed the Azores his next landfall could very well be the coast of Africa over 1,000 miles away.

Repairs were completed on NC-4 but the crew was forced to stay at their Chatham mooring by gale-force winds and rain. There was concern among NC-4's crew that if Commander Towers received a favorable weather forecast, he would feel obliged to take advantage of it and "go" for the Azores, without them. Newspapers were calling NC-4 the "lame duck" and circulating ill-founded rumors that it would be withdrawn from the mission. But the weather cleared on the 14th, so NC-4 was able to fly as far as Halifax that day and arrived at Trepassey the next.

Commander Towers, in the meantime, had received a more favorable weather report on the 15th and decided to go—without NC-4. But both NC-3 and NC-1 proved to be overloaded with fuel and could not get airborne in the choppy water. The forecast for the 16th, however, was even better, and besides, none had wanted to leave NC-4 behind. But now with the weather finally abating, all three could go together.



NC-4 in hangar at Pensacola sometime after its historic flight. The original NC-4 aircraft is currently on display at the Naval Aviation Museum, Pensacola NAS, Florida.

On Friday evening, 16 May, the three NC boats roared in turn down Trepassey harbor and flew off into the gathering darkness over the Atlantic. The evening takeoff was necessary so that they could reach the Azores after sunrise the next day and enjoy daylight landing conditions.

The night passed without incident. The huge flying boats droned over the destroyers at their ocean stations with reassuring regularity. During the night the three planes broke from their formation to avoid the risk of collision. Furthermore, each airplane had its own flying characteristics and cruising speed; NC-4 was the fastest and NC-1 the slowest of the three.

Troubles came with the dawn. Sunrise was closely followed by the onset of fog.

In NC-3, Towers spotted a ship on the foggy horizon that he took to be one of the station destroyers and altered course accordingly. It proved to be the cruiser *Marblehead* returning from Europe, and this misidentification produced an erroneous bearing that took NC-3 far off course. Finally, with fuel running low, and determining by dead reckoning that he was somewhere close to the Azores, Towers decided to put down long enough to obtain a navigation fix. The seas were running high and the landing was so rough that the impact collapsed the struts supporting the centerline engines. In this condition NC-3 would go no further except as a surface craft.

Meanwhile, Bellinger was having similar navigation difficulties but landed NC-1 without accident. Once down, however, he could not get off again through the 12-foot high waves that were breaking over the floundering amphibian which would, indeed, be lucky to survive them at all.

Read, in NC-4, had also "run out of ships" and was virtually lost in the fog, which one time was so thick that the crew could not see from one end of the plane to the other. At one point the pilot became totally disoriented, causing him to almost put the cumbersome craft into a dreaded spiral dive. Ensign Herbert Rodd, the radio officer, was successful, however, in picking up radio bearings and weather information from the destroyers hidden below by fog and clouds.

After more than 15 hours in the air, Lieutenant Commander Read's dead reckoning and Ensign Rodd's radio reports gave assurance that NC-4 was very near the Azores. A sharp lookout was kept by all hands. Suddenly, island greenery appeared through a small break in the fog. It was Flores, one of the western islands in the Azores chain.

With Flores as a checkpoint, Read swung NC-4

eastward for the islands of Fayal and São Miguel. The fog began to thin, but soon thickened again, and Read settled for immediate haven on Fayal. NC-4 landed in the harbor of Horta a bit before noon. Within minutes a great bank of fog blotted out the port completely.

Upon boarding the cruiser *Columbia,* base ship for the mission at Horta, the first thought of Read and his men was to ask about the NC-3 and NC-1.

It was soon apparent that NC-1, trapped and pummeled by the great waves, was lucky to stay afloat, let alone take off. The Greek freighter *Ionia* appeared out of the fog and rescued Bellinger and his crew. Attempts to salvage the derelict NC-1 were thwarted by the heavy seas and it finally sank three days later.

The fate of NC-3, after remaining a mystery for 48 hours, proved to be a saga of the sea. Before leaving Trepassey, Commander Towers had jettisoned the emergency radio transmitter to reduce weight for takeoff. Thus, NC-3 could

Photos courtesy Naval Aviation Museum, Pensacola NAS, Florida.

receive radio calls but was "voiceless," and pure seamanship had to take over. Towers figured that within two or three days the NC-3 would drift in close to the island of São Miguel in the eastern Azores. His estimates proved correct when on Monday afternoon, 19 May, the battered and almost derelict NC-3 "sailed" into the harbor of Ponta Delgada.

For almost three days NC-4 rode her moorings at Horta, kept there by high seas, rain and fog. On the 20th the weather cleared enough to permit takeoff, and in less than two hours she reached Ponta Delgada. Read planned to take off for Lisbon the next day, but weather and engine troubles delayed the departure for a week.

The men of NC-4 were up before dawn on Tuesday, 27 May 1919. As Read gave the word, Lieutenant Elmer Stone advanced the throttles and sent the big flying boat charging down the harbor in a great V-shaped wedge of spray, lifting off at 0818 hours.

Another chain of destroyers extended between the Azores and Lisbon. As NC-4 overflew them, each ship radioed her passage to the base ship *Melville* at Ponta Delgada and the cruiser *Rochester* in Lisbon, who in turn reported to the Navy Department in Washington. Finally word came from the destroyer *McDougal,* last ship in the picket line, that completion of the flight was only minutes away.

In NC-4 all eyes peered eastward where the horizon was fading into the deep purple of twilight. Then at 1939 hours, from the center of a darkening line, there flashed a diamond spark of light from Cabo da Roca lighthouse—the westernmost point in Europe had been sighted. Minutes later, NC-4 roared over the rocky coastline and turned southward toward the Tagus estuary and Lisbon.

According to Read, a man of few words, this moment was "perhaps the biggest thrill of the whole trip." Each man on board realized that "No matter what happened—even if we crashed on landing—the transatlantic flight, the first one in the history of the world, was an accomplished fact." At 2001 hours on 27 May 1919, NC-4's keel sliced into the waters of the Tagus.

Upon arrival in Lisbon, all three NC crews were generously feted by the Portuguese government and the city of Lisbon. After two days NC-4 continued her flight to Plymouth, England, the port where the Pilgrim Fathers had left for America 299 years before.

On the morning of 29 May, NC-4 departed Lisbon, but a few hours later, off Monedego River, was forced down by engine trouble. This was soon repaired, but it was getting late and Read refused to risk a landing at Plymouth in darkness. So NC-4 flew only to El Ferrol, Spain, for the night. The next day NC-4 made the final leg of the flight, landing in Plymouth harbor early in the afternoon of 30 May.

After May 1919, the world knew that aviators would fly the Atlantic again. And again! And again! They would fly it faster and with fewer stops. They would fly it nonstop, in company, and alone. They would fly it with tens and even hundreds of passengers, at speeds and with comforts difficult to imagine in 1919.

But no one again could be first.

That honor belongs to Lieutenant Commander Albert C. Read, his crew of five, and the United States Navy's NC-4.

—Adapted from Smithsonian/*Naval Aviation News* pamphlet "The NC-4: The First Transatlantic Flight."

DEJAVU

# Rota Naval Station, Spain
## (elevation 86 feet)

Located near the Gulf of Cadiz on the southwestern tip of sunny Spain, Rota Naval Station is 56 nautical miles northwest of the Rock of Gibraltar. Rota has one runway (10/28) 12,100 feet long and 200 feet wide. The first 2,100 feet of runway 28 has a one percent up slope. Taxiways and parking ramps are south of the runway. At the narrowest point, the taxiways leading into the ramp are 75 feet wide.

The terrain in the area is flat. A hill, 22 miles northeast and 1,339 feet MSL, is the highest point within 25 miles of the field. A water tower, 269 feet MSL, is located ½ mile south of the runway. Circling is not authorized south of runway 10/28.

Instrument approaches include NDB, tacan, surveillance, precision, and circling. Both ends of the runway have runway lights (HIRL). The U.S. Navy also uses an optical landing system.

The approach to runway 10 is over the Atlantic Ocean. A go-around presents little hazard. Rota experiences heavy concentrations of birds during winter through late spring.

Rota has a number of U.S. Navy aircraft stationed there. The field is suitable for C-141A/B and C-130 aicraft. It is also suitable for C-5 aircraft when the optical landing systems are removed. Airlifters should consult the 21 AF airfield restrictions before landing at Rota NS.

—Adapted from AQP 51433

On final, Runway 10 at 2.5 miles. The approach is over the Atlantic Ocean.

Runway 10. A go-around presents little hazard.

Two miles out, Runway 28. The munitions storage area is to the right.

# C.R. TERROR

**The Lightheaded Leader logs a Santa sortie.**

Major Terror, if you can't see the light at the end of the tunnel, you better get your eyes adjusted to the dark," Colonel Fang growled at the Cringing Crewmember. "And speaking of dark," the enraged CO continued, "it oughta be dark most of the time in northern Norway this time of year. You're going to spend the holidays in Bodo, Buddy," said Fang menacingly. "They need a linen control officer up there during the 'Arctic Impress' exercise employment and I'm volunteering *you*. That should keep you occupied with something other than bending up my airplanes. And the best part is, the flight leaves tomorrow," said the commanding officer triumphantly, very pleased with himself for getting rid of this accident-prone pilot — at least temporarily. "I don't want to see your face around here until the New Year. Then we'll see if you're retrainable as a co-pilot. This little trip will give you a chance to really cool your heels and contemplate what I jokingly refer to as your career, or what's left of it. Now, get out of my sight!"

The severely chastised crewman crawled out of the office and slowly made his way to the club, his ragged rear still smoldering from the verbal violence so recently and so expertly inflicted on his person. He would have tucked his tail between his legs were it not for the fact that Col Fang had just chewed it off. The club was just beginning to fill with patrons intent on some Friday afternoon socializing. But C.R.'s ego was in such a shambles, it was all he could do to unsteadily mount his customary corner barstool and call weakly for the barkeep. "I'll have a Terrorific 'tini please Josephine, only this time make it on the rocks, just like my career."

"You look like you were rode hard and put up wet, sugar," consoled the merry mixologist.

"You don't know the half of it," sighed the Wilted Warrior. As C.R. began drowning his sorrows, he blocked out the den from the TGIF crowd and slowly withdrew into his own shell to contemplate this latest and, to his way of thinking, obviously undeserved calumny. "There goes all the plans I had for the holidays," he mumbled sullenly. "And what's Tassels gonna say when I tell her I've got to go away, arrgh." The usually Mirthful Major's optimism was at its lowest possible ebb, as he slowly swirled the tinkling glass and stared idly into its icy recesses.

The high-pitched roar from the C-130's props sliced through C.R.'s cranium like a knife as the inevitable effects of over imbibing exacted its pounding and painful price. Relegated to duty-passenger status, the Hungover Honcho fidgeted in the troop seat, trying to get comfortable. Because he was the only passenger amidst the wall-to-wall cargo, he tried to stretch out on the tightly drawn material, but couldn't find an agreeable position no matter how hard he tried. "These seats must have been designed by the Marquis de Sade," C.R. mumbled as he squirmed in his seat. "Hey load, how about some more heat back here," he yelled to the crewmember who acknowledged with a thumbs-up gesture. But before the loadmaster could transmit the request to the

cockpit, the Hercules suddenly began bucking like a berserk mechanical bull.

"What the!" C.R. exclaimed as the turbulence worsened and the whine of the engines changed perceptibly. "Wonder what's wrong," C.R. thought out loud. "Must be one of those storms this part of the world is so famous for. We must have crossed the arctic circle by now so we should be getting close to Bodo—I hope." Just then the PA crackled to life, a frenzied voice announced that the aircraft was experiencing severe icing, two of the engines had already quit and everybody should prepare for a crash landing.

"Oh great, that's all I need," C.R. groaned while automatically cinching his seat belt down until it made a groove in the Pudgy Pilot's prodigious paunch. The loadmaster checked the cargo tiedowns then retreated to the cockpit, leaving C.R. alone, despite his loud protests. "It's a good thing, he's not on my crew," C.R. squawked, addressing his remarks to a nearby jeep. "Sergeant Downs would never leave his assigned post during such an emergency." Suddenly, six short rings from the warning bell reverberated loudly through the cargo compartment. C.R. grabbed an extra pillow from the adjacent seat, clutched his blanket for extra security, and prepared for the worst. In a jolt that nearly caused him to bottom out through the webbing of his seat, C.R. felt the tremendous G forces take hold of his body and then throw him forward against the straining seat belt. Next, he was aware that the interior lights were flickering, then dimming and finally going out completely. The interior lights of MAC's most senior Major also flickered and dimmed as he lost consciousness.

Two sensations slowly brought C.R. back to semi-consciousness. First, there was this very cold feeling on the tip of his nose. Also, he felt as if someone was licking his right ear. Still groggy, the shivering survivor realized his nose was embedded in a snow bank, along with most of the rest of his body. Slowly lifting his head out of the fluffy white stuff, he turned, but jumped with surprise as he suddenly found himself looking into the big brown eyes of some kind of small deer, complete with antlers and a red harness. "So

you're the one whose been blowing in my ear," C.R. said as he reached up and patted its snoot, a spontaneous smile spreading across his face as he realized he had survived the crash. "I must have instinctively opened the crew entrance door and crawled out to escape a possible fire," he mumbled to the curious animal which stood staring pleasantly at the befuddled pilot. It was then that C.R. noticed the animal's larger than necessary, and very bright red nose. "Umm, a deer that looks like W.C. Fields," he observed out loud. "Well, we *are* next door to Lapland, so you must be one of their stray reindeer," he concluded logically.

Just then he heard *the* voice. "Oh Rudolph, Rudolph, where are you? Oh, ho, ho, ho! There you are, Rudolph, and I see you've found our missing friend."

C.R. raised up, rubbing his eyes in disbelief at the approaching figure. "Come on," he stammered, obviously doubting his senses. "It can't be. I must have hit my head or something. That's it, I'm hallucinating, and I must be in shock and just think I see what I'm seeing." The Incredulous Crewmember slammed his eyes shut, then opened them cautiously, hoping the apparition would vanish. But it didn't. He came up to within an arm's length of the Traumatized Titan of the airways. "Sa, Sa, Santa Claus? Is it really you?" C.R. studdered in shear amazement.

"It ain't little Orphan Annie," chuckled the Jolly Old Elf. "How do you feel, young fellow? You're just a bit shaken up, but you'll be all right—no broken bones or internal injuries. There now, let me help you up."

Shaking the snow off his flight suit, C.R. studied the red outfit, trimmed in white fur, the smiling face with sparkling eyes framed in the snow-white beard. "You *are* Santa Claus!" C.R. exclaimed, finally believing his senses.

"You bet your nomex I am, and according to your name tag, you must be C.R. Terror."

"At your service, Santa, and I'll be forever grateful that you came along when you did. Imagine, me, being rescued by Santa Claus, himself. Wait 'till the folks back home hear about this." Then, glancing back at the crippled Hercules, C.R. asked solemnly, "What about the rest of the crew?"

"Oh, they're fine. I already shuttled them to within walking distance of the base. But we had a little trouble finding you, so I left Rudolph behind to look for

you while I was gone," he concluded, patting the red-nosed reindeer's head.

"You mean you've got your famous sleigh here with you," C.R. asked excitedly.

"And my other reindeer too," Santa prompted. "Actually I've got my A-team, you know, the biggies, Dancer, Prancer, Donner, Blitzen and the rest. Come over here behind the snow drift and I'll give you a tour."

"Wow, this has got to be the ultimate static display," squealed C.R. as they approached the legendary sleigh with its world renowned reindeer team. The Mesmerized Major quickly realized this particular vehicle was nothing like the one he remembered going to Grandma Terror's house in as a child. "Gee, Santa, it's not anything like the pictures I've seen," said C.R.

"Oh, most people think I'm still flying around in that 19th century model. This is the latest up-to-date version; gotta keep up with the times ya know, ho, ho."

"By the way, Santa," C.R. inquired boldly, "I always heard you lived at the North Pole. I realize we're above the arctic circle but what exactly are you doing down here? Christmas isn't for another week or so."

"Right you are, C.R. m'lad. You see, I've just picked up my rig from LPDM. Those Laplanders really have a corner on reindeer and sleigh technology and their depot maintenance is the best this side of Warner Robins," affirmed Santa. "Why, even my elves can't touch 'em as far as the high tech stuff goes."

"Wow, you sure do know a lot about—I mean you talk like a pilot."

"Ho, ho, ho! What do you think I've been doing all these years, sending the Christmas presents by Emery Express? I'm the o-riginal airlifter, my good lad. See." Santa stretched out his arm and indicated C.R. should touch it.

"Nice material," admitted the Best-Dressed Pilot in MAC.

"I thought you'd appreciate it," Santa said sheepishly. "You know, those Gnomes really know how to put together a super flight suit."

"Oh no!" C.R. grinned, realizing what was coming next.

"You got it, ho, ho, it's a Gnomex!" roared the Jolly Red Ribber. "Now let me show you some of our newest mods."

C.R. beamed as he basked in the radiant presence of such a jovial character, and with such an appealing sense of humor too, he thought.

"Here it is, fresh from the shop," Santa chuckled, pointing to the entryway into the "cockpit." Stepping up on the running board to get a better view, C.R. marvelled at the instrumentation.

"Oh boy, what's all this stuff do?"

"Glad you asked," Santa said proudly, like any pilot anxious to show off his aerospace vehicle. "It's fully FCE capable with a separate CRT for data call up," Saint Nick explained, pointing to the darkened screen and an attitude indicator that looked more like a three-dimensional hologram.

"I know what a CRT is, but you've got me on the FCE," the MAC know-it-all admitted freely.

"Hee, hee," returned Herr Claus, "I was hoping you'd bite on that one. It's simple enough, FCE is an acronym we in the trade use. It stands for 'Foggy Christmas Eve' and CRT, besides being your initials, stands for 'Christmas Reindeer Tube.' It's got a data link with Rudolph whose nose now has a search mode. I can call up data on the locations of all the good boys and girls, ho, ho! By the way, C.R., have you been a good boy this year?"

"I've been just as good as I *can* be, Santa," replied the Master of Mendacity.

"Ho, ho, that's a good one, and I believe you have," replied the all-knowing gift-giver.

"You know, Santa, there's something I've always wondered about, even when I was a little shaver just getting interested in flying."

"What's that, C.R.?"

"What makes it fly? I mean, how do you get it off the ground? You don't have any wings to produce lift and what

do you use for propulsion?"

"It's really quite simple, m'lad," explained the Bearded One. "See those reindeer? Well, after the last LPDM mod, each of those beauties is flat rated at 5,000 SRP each."

"Don't tell me, the Ace of Acronyms insisted, "Let me guess—'Shaft Reindeer Power,' right."

"You catch on quick, C.R.," complimented Kriss Kringle. "And observe their trailing edges. What appears to be a standard reindeer tail is actually a very sophisticated externally-blown flap that gives us additional propulsive lift and increases maneuverability at low speeds. That's critical when making approaches to roof tops, especially nowadays with so many condos going up. Those fire walls sticking up between the individual units makes for a sporty approach and landing. And believe me, C.R., it takes pinpoint accuracy to drop this baby in between all those obstructions—you know, chimneys, TV and CB antennas. I'm even seeing satellite receiver dishes popping up on roofs these days."

"Gee, I never thought about that," C.R. mused. "And to think I always considered going into Sicily LZ as a challenge."

"And that's not all," continued Father Christmas. "The sleigh's equipped with a fully loadable ramp which can accommodate even outsized toys. And check those out," Santa said, pointing down to the undercarriage. "We just added supercritical runners and skids with winglets for cruise efficiency and stability."

"Fantastic," exclaimed C.R. "What's that little compartment on the very rear of the fuselage?"

"Oh that, its the AEU. We found that's the best place for it—keeps the noise level down you know."

"Don't you mean the APU instead of AEU, Santa?"

"No, Elf starts with an 'E' not a 'P.' In fact I was just checking it out as part of the flight acceptance check when Rudolph picked up your C-130 on his search mode." Then Santa, placing a finger up his nose, asked C.R. if he would like to ride in the right seat on the way back to the environs of the base.

"Would I ever!" C.R. accepted excitedly. "It would be the best Christmas present I could imagine."

"I thought so," assessed the Ageless Aeronaut. "Well, hop aboard then and strap in next to me and I'll demonstrate a max performance takeoff. Should be spectacular as light as we are."

So C.R. slid into the long leather bench-seat and strapped in. As soon as Saint Nick sat down, the instruments came alive, and grabbing the reins, Santa gave the familiar and melodic order to his team, only slightly updated from that recorded by Clement C. Moore so many years ago. "Dash away, dash away, max power all!"

With that, he flicked the reins ever so slightly and they launched into the arctic twilight with a bound. C.R. could scarcely believe his senses. Here he was, actually flying copilot for good old Saint Nick, with the icy wind freezing his nose as they quickly accelerated to climb speed. C.R., smiling mightily, closed his eyes for a second to absorb the fantastic sensation of speed and excitement.

"Boss, boss, wake up!" C.R.'s long suffering copilot gently shook his dozing AC's shoulder while carefully lifting his nose out of his 'tini-on-the rocks into which it had momentarily splashed. "Are you okay?" the concerned copilot inquired as his mentor quickly revived, rejoining the world of the wakeful with a jolt.

"Sam, what are you doing here?" the still slightly disoriented skipper asked excitedly, shaking his head and almost falling off the bar stool. "Where am I? Where's Santa?"

"Santa? Boss, what are you talking about? I heard about your session with Colonel Fang this afternoon. There's been some new developments," explained Sammy.

"What might that be?" C.R. winced. "Has the CO made me the officer-in-charge of toilet tissue at Thule instead?"

"No, boss," chirped the cheerful copilot. "The've cancelled 'Arctic Impress,' so you won't have to go after all."

"Well now, that's more like it," rebounded the Fully Recovered Fieldgrader. "There may be hope for this holiday season yet."

"Sure, boss, there's always hope," reassured Sam.

C.R. turned and faced his copilot and confidant, an excited, childlike expression enveloping his face. "Sammy, have you ever wondered what makes Santa's sleigh fly?"

"Not lately, boss, not lately."

# QUICK STOPPERS

## Stimulating Simulation

Sometimes even checkrides can go slightly awry due to mechanical glitches. Take the case of an annual evaluation in a CT-39. The flight examiner pilot deftly moved the numero uno throttle to idle to simulate a single engine landing. Somewhere on downwind, the number two engine low oil pressure light blinked on, then off. Then number two oil pressure dropped to 20 psi, but returned to 45 psi. The left engine power was returned to normal and number two engine was brought to idle. Number two oil pressure again dropped below 20 psi and the crew decided, "Enough's enough!" They immediately shut down the errant number two engine. The post-flight inspection revealed the oil had drained out of the engine because the drain plug had fallen out. And why, you ask, did the drain plug fall out? Seems a maintenance troop forgot to torque and safety wire the drain plug. And for want of a nail, the shoe was lost. . . !

## *Tree Strike!*

This is one for the books and really makes you sit up and wonder. The young TH-1F helicopter pilot was in the midst of conducting an orientation flight for five passengers and one flight mechanic. Everything was going smoothly along the preplanned and authorized route at 300 to 500 feet AGL. About 6 minutes into the 10 minute flight, though, the young fling-winger decided to demonstrate some "mow-level" flight and descended below the authorized altitude. Planning to level off around 50 feet above the ground in the vicinity of a tree, the pilot started a rapid, left descending turn at about 85 knots indicated. At an estimated 70 feet AGL, the pilot raised the collective to begin leveling the hurtling Huey. Instead, the deepening descent continued until the 'copter struck the tree, shattering the copilot's chin window. After clambering back to altitude, the now-humbled Huey made an uneventful landing at its home base. Post-flight inspection revealed leaves in the pitot tube, green streaks on the main and tail rotors, the shattered chin window and a 3/4-inch-long tear in the left synchronized elevator. All the safety and Stan-Eval standards in the world won't help those who consciously choose to ignore them and insist on needlessly endangering the aircraft and the precious lives they are entrusted to safely transport.

# Before Landing Check

A Beechcraft U-21A was on radar vectors for a precision radar approach in VMC. As the copilot attempted to lower the gear, both pilots heard a loud noise and the gear stopped moving. Only the left main and nose gear showed safe and the red light in the handle was shining brightly. The crew declared an emergency, discontinued the PAR and flew a low approach.

An Air Force runway safety officer (RSO) confirmed that the gear looked down. After following all emergency checklist procedures and attempting manual extension, the crew attempted to land. The pilot touched the left main down first then the right. As the right main touched down, the U-21 began to sink abnormally low and the crew was advised to go around by the RSO. The U-21 took off again and a C-12, with an Army U-21 instructor on board, took off for a join up. Looking at the crippled Beechcraft, the C-12 radioed to the stricken U-21 that now *both* main gear were hanging at the same angle. A high "g" maneuver was attempted which resulted in both main gear locking down into the normal position. This did the trick and the crew then made an uneventful landing. All this occurred in just one proficiency sortie. Still, heads-up action by everyone involved, saved a valuable aircraft and crew.

# What's in a Box?

Shortly after level off at FL 350, the Starlifter crew noted some peculiar fumes coming from the cargo compartment and from one box in particular labeled "rocket motor." The scanner and loadmaster started feeling nauseous and developed headaches. All crewmembers went on oxygen and the aircraft made a quick landing at an foreign base to further investigate the suspect container. The load and scanner were met by the medics who took them to the local base hospital. Meanwhile, back at the aircraft, the foreign loading crew began unloading the botched box. Shortly thereafter, two of them began complaining of headaches and sore throats and were also taken to the hospital. By this time the score was: box 4 - people 0. Further investigation revealed the rocket motor had developed a leak in the sealant, causing the caustic propellant fumes to escape and wreak havoc with the crew and load team. After a new type plug was installed, the shipment was recertified—for surface transportation *only*!

# NOTABLE QUOTE

One should *not* aim at being possible to understand, but at being impossible to *misunderstand.*

—From PAI *Air Safety*

# AFTER DEADLINES

SYSTEMS UPDATE

C-141/C-130 IMPROVED FLIGHT RECORDING SYSTEM (IFRS) - On 25 September 1981 WR-ALC awarded a firm fixed price contract to Lockheed Aircraft Services Company, Ontario, California for an improved flight recording system for C-141 and C-130 aircraft. The contract calls for the acquisition of a Digital Flight Data Recorder (DFDR) and a Cockpit Voice Recorder (CVR) for both aircraft. The DFDR replaces the antiquated analog flight data recorder currently in the C-141. CVR for both aircraft and the DFDR for the C-130 will be initial installations. To improve survivability and enhance accident investigation, the recording units will be installed in the aft section of both aircraft. Trial installations for both aircraft begin in April 1982, with production installations beginning in January 1983. Installations will be accomplished during Programmed Depot Maintenance (PDM) and supplemented by depot field teams, at a rate of 20 per month for each type aircraft. Information courtesy of WR-ALC/MMSH.

C-5 COLOR RADAR - The C-5A aircraft is scheduled to receive a new commercial weather radar system to replace the current, multi-mode radar. The new weather radar has a predicted mean time between failure (MTBF) of 500 hours compared to the 36 hour MTBF on the present system. Many of the Line Replaceable Units (LRUs) on the new radar will be totally interchangeable with LRUs on the C-141 radar system, making the new C-5 radar much easier to support. A prototype is scheduled to be installed in April 1982. If it checks out, modification of the fleet will begin in June 1983 with completion in December 1985. Information courtesy of SA-ALC/MMSG.

ACCIDENT-FREE RECORDS - Two Air Force Reserve squadrons operating C-130's recently attained accident-free flying milestones. The 64th Tactical Airlift Squadron based at Chicago-O'Hare IAP has the honor of being the AFRES squadron with the longest accident-free flying span. Now flying C-130A's, the 64th has not had a mishap since April of 1947 while logging over 120,000 flying hours since that time. The AFRES squadron with the most safe-flying hours is the 704th Tactical Airlift Squadron at Bergstrom AFB, Texas. Equipped with C-130B's, the 704th has accumulated over 155,000 flying hours since 25 May 1955. TMF salutes these units on their outstanding safety records and extends our best wishes for many more years and hours of safe flying.

# The MAC Flyer

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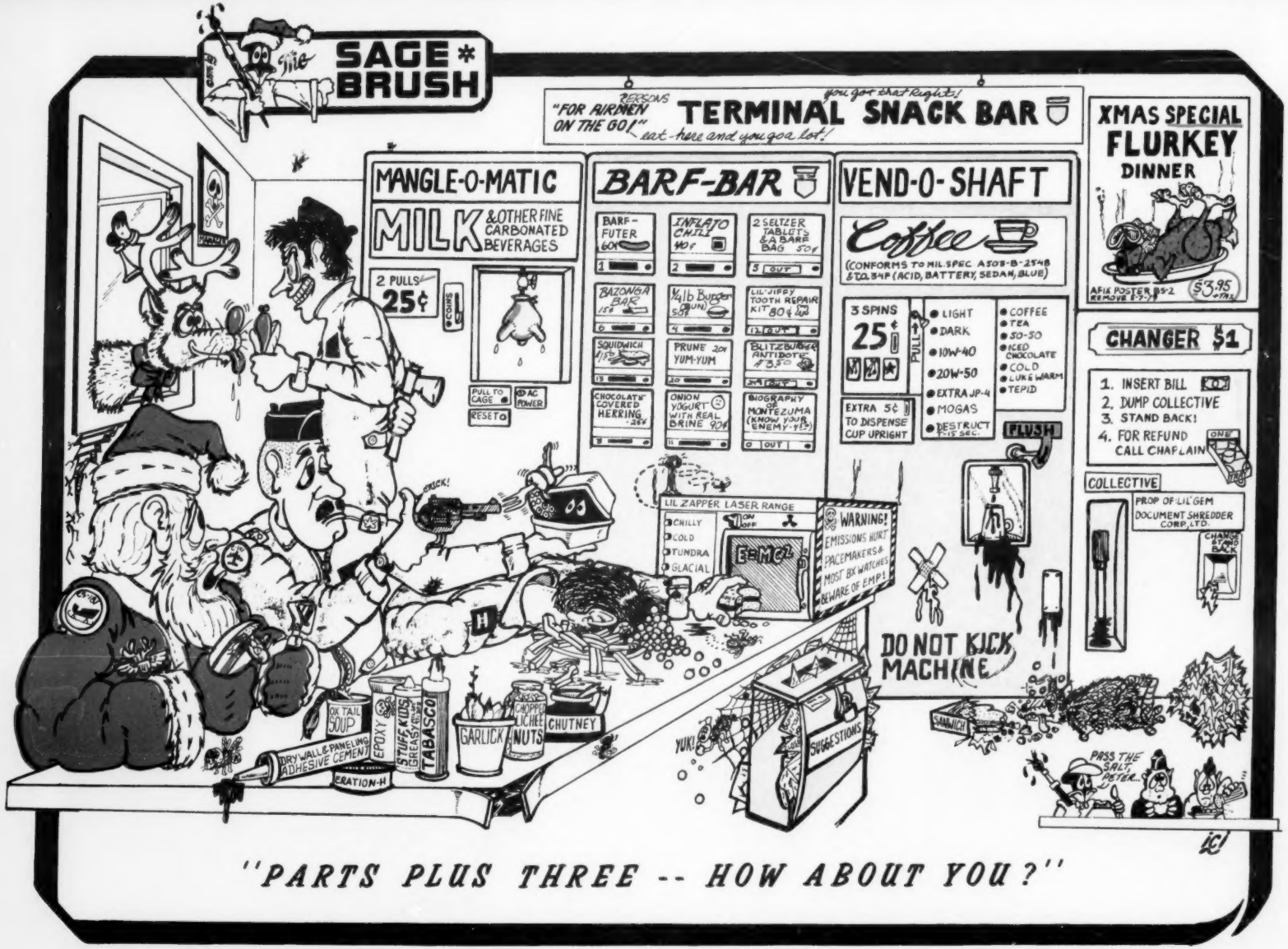


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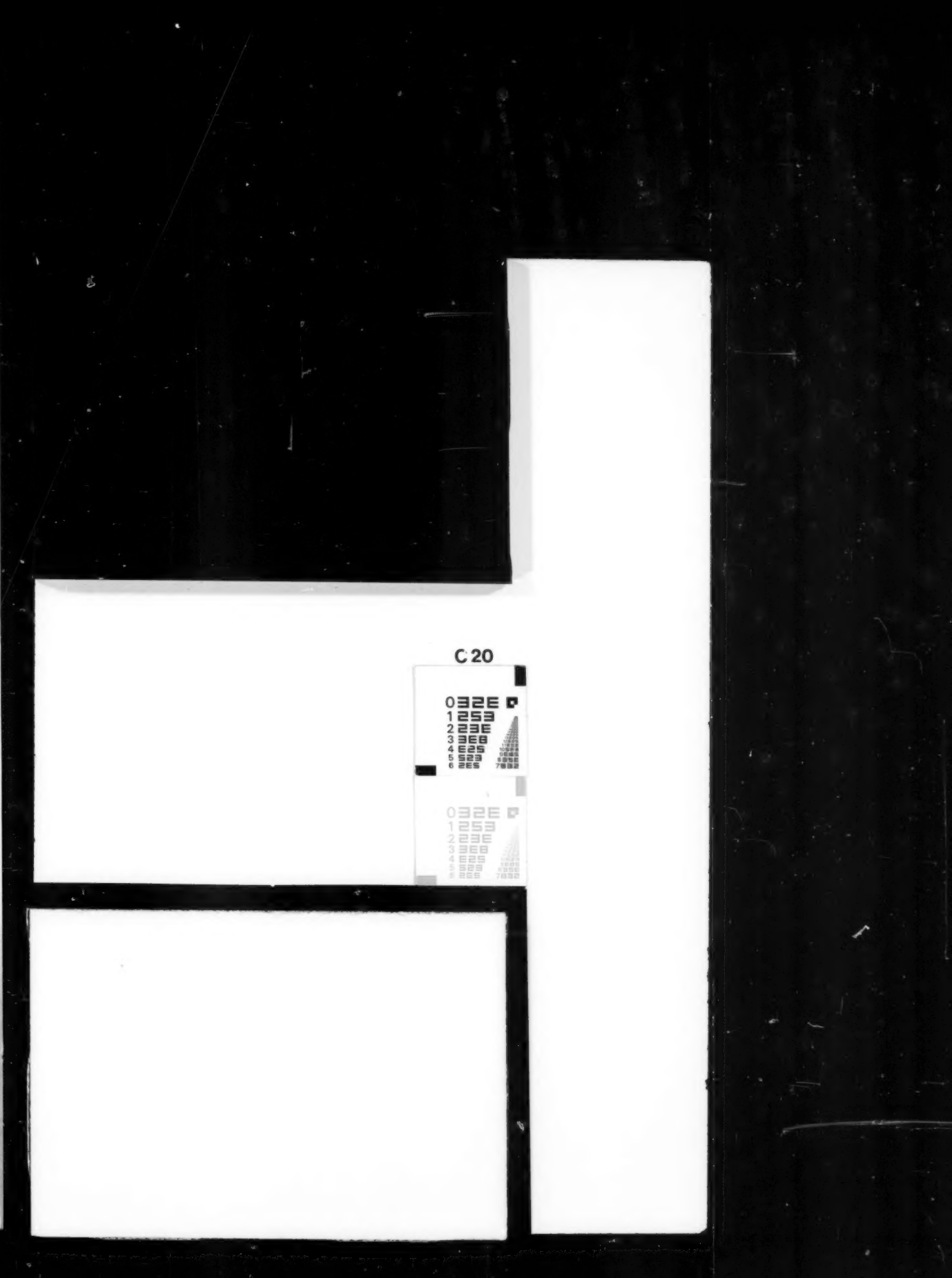
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